

*Subject*

CLAIMS

What is claimed is:

1. A method for testing a transmission system, the method comprising:
  3. receiving a time division multiplexed (TDM) stream on an input of the transmission system, wherein the TDM stream comprises a plurality of data fields and a plurality of unused fields;
  6. inserting test data in one or more of the plurality unused fields of the TDM stream;
  8. transferring the TDM stream along a plurality of components of the transmission system; and
  10. comparing the test data against the transferred test data.
1. The method of claim 1, wherein transferring the TDM stream comprises generating a connection path between the plurality of components of the transmission system.
1. The method of claim 2, wherein the connection path is configured to transfer the test data between the plurality of components of the transmission system using one or more of the plurality unused fields of the TDM stream.
1. The method of claim 3, further comprising storing the transferred test data prior to comparing the test data against the transferred test data.

1           5. The method of claim 3, further comprising generating an error flag  
2 if the test data is different from the transferred test data.

1           6. A method for testing a digital signal processor (DSP) of a  
2 transmission system, the method comprising:  
3           receiving a time division multiplexed (TDM) stream on an input of the  
transmission system, wherein the TDM stream comprises a plurality of data  
fields and a plurality of unused fields;  
6           generating a signal, wherein the signal is generated by the DSP  
7           inserting test signal in one or more of the plurality unused fields of the  
8 TDM stream;  
9           transferring the TDM stream along a plurality of components of the  
10 transmission system; and  
11           comparing the test signal against the transferred test signal.

1           7. The method of claim 6, wherein transferring the TDM stream  
2 comprises generating a connection path between the plurality of components of  
3 the transmission system.

1           8. The method of claim 7, wherein the connection path is configured  
2 to transfer the test data between the plurality of components of the transmission  
3 system using one or more of the plurality unused fields of the TDM stream.

1           9. The method of claim 7, further comprising generating an error flag  
2 if the test signal is different from the transferred test signal.

- SUBP*
- 1        10. A transmission system comprising:  
2            a controller, wherein the controller is operable to set up call connections  
3            between interfaces of the transmission system;  
4            a framer block coupled to the controller, wherein the framer block is  
5            operable to generate time division multiplexed (TDM) stream having a plurality  
6            of data fields and a plurality of unused fields;  
7            a logic circuit coupled to the controller and the framer block, wherein the  
8            logic circuit is operable to insert test data in one or more of the plurality of  
9            unused fields; and  
10            a plurality of time slot interchangers coupled to the controller and the  
11            FPGA, wherein the TSIs are operable to switch the fields of the TDM stream.
- 1        11. The transmission system of claim 10, wherein the time slot  
2            interchangers are further operable to transfer the test data along components of  
3            the transmission system using one or more of the plurality of unused fields.
- 1        12. The transmission system of claim 11, wherein the logic circuit  
2            comprises a receiver, the receiver operable to store the transferred test data.
- 1        13. The transmission system of claim 12, wherein the logic circuit  
2            further comprises a comparator, the comparator configured to compare the  
3            inserted test data and the transferred test data.

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1        14. The transmission system of claim 13, wherein the logic circuit is  
2 further operable to generate an error flag if the inserted test data is different from  
3 the transferred test data.

1        15. The transmission system of claim 14, wherein the logic circuit  
2 comprises a field programmable gate array.